UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,907	03/29/2001	Sam Mohan	CISCP695	9030

26541	7590	01/25/2006

Cindy S. Kaplan
P.O. BOX 2448
SARATOGA, CA 95070

EXAMINER
MATTIS, JASON E

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/822,907	MOHAN, SAM
	Examiner	Art Unit	
	Jason E. Mattis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 November 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to the amendment filed 11/3/05. Due to the

amendment, the previous claim rejections under 35 U.S.C. 101 have been withdrawn.

Claim 2 has been cancelled and new claims 18-21 have been added. Claims 1 and 3-

21 are currently pending in the application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bondi (U.S. Pat. 5710885) in view of Miller et al. (U.S. Pat. 6014707).

With respect to claim 1, Bondi discloses a method of monitoring nodes in a

network comprising a network management system and a plurality of nodes **(See the**

Abstract and Figure 2 of Bondi for reference to a method and system for

monitoring nodes in a network having a plurality of nodes). Bondi also discloses

processing at the network management system at least one node identified by an

identifier in a set of a list of sets with each set of the list of sets including zero or more

identifiers of nodes by sending a polling message from the network management station

to at least one node **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of**

Bondi for reference to processing nodes by sending a status poll from a

management station to the nodes that are identified by IP addresses, or

identifiers, in a entry, which is a set containing 1 node, of a queue, which is a list

of the entries, or sets, with each entry in the queue corresponding to exactly one

node identifier). Bondi further discloses advancing to the next set of the list of sets

(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference

to sending status poll messages to each node in the queue at a predetermined

time interval meaning that after a poll is sent to the current entry in the queue, the

queue will advance to the next entry and send a poll to the next entry after the

predetermined period of time). Bondi also discloses receiving a polling response

from the at least one node at the network management system **(See column 5 line 54**

to column 6 line 28 of Bondi for reference to nodes sending polling response

back to the management station). Bondi does not disclose that network management

system comprises a set of identifiers in a circular list of sets.

      With respect to claim 9, Bondi discloses a system comprising a processor **(See**

column 1 lines 41-64 of Bondi for reference to a host processor that is a network

management station in a system). Bondi also discloses a memory storing a network

management system for execution by the processor for monitoring nodes in a network

(See column 1 lines 41-64 of Bondi for reference to the network manager being

responsible for monitoring nodes of the system, meaning, since the network

manager is a processor, there must be a code stored in a memory of the network

manager that is used to monitor the nodes). Bondi further discloses computer code

that processes at least one node identified by an identifier in a set of a list of sets with

each set of the list of sets including zero or more identifiers of nodes **(See column 5**

line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to the network

monitor processing nodes by sending a status poll to the nodes that are

identified by IP addresses, or identifiers, in a entry, which is a set containing 1

node, of a queue, which is a list of the entries, or sets, with each entry in the

circular queue corresponding to exactly one node identifier, meaning there must

be a computer code stored in the network manager to execute this process).

Bondi also discloses computer code that advances to the next set of the list of sets **(See**

column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to

sending status poll messages to each node in the queue at a predetermined time

interval meaning that after a poll is sent to the current entry in the queue, the

queue will advance to the next entry and send a poll to the next entry after the

predetermined period of time, meaning there must be a computer code stored in

the network manager to execute this process). Bondi does not disclose that the list

is a circular list of sets.

　　With respect to claim 10, Bondi discloses a method for monitoring nodes in a

network including a plurality of nodes **(See the Abstract of Bondi for reference to a**

method and system for monitoring nodes in a network having a plurality of

nodes). Bondi also discloses a means for processing at least one node identified by an

identifier in a set of a list of sets with each set of the list of sets including zero or more

identifiers of nodes **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of**

Bondi for reference to processing nodes by sending a status poll to the nodes

that are identified by IP addresses, or identifiers, in a entry, which is a set

containing 1 node, of a queue, which is a list of the entries, or sets, with each

entry in the queue corresponding to exactly one node identifier). Bondi further

discloses a means for advancing to the next set of the list of sets **(See column 5 line**

54 to column 6 line 28 and Figures 3-5 of Bondi for reference to sending status

poll messages to each node in the queue at a predetermined time interval

meaning that after a poll is sent to the current entry in the queue, the queue will

advance to the next entry and send a poll to the next entry after the

predetermined period of time). Bondi does not disclose that the list is a circular list of

sets.

  With respect to claim 11, Bondi discloses a method of monitoring nodes in a

network comprising a network management system and a plurality of nodes **(See the**

Abstract and Figure 2 of Bondi for reference to a method and system for

monitoring nodes in a network having a plurality of nodes). Bondi also discloses

receiving a signal from a timer at periodic intervals **(See column 5 line 54 to column 6**

line 28 and Figures 3 of Bondi for reference to a status poll transmission queue

10 receiving periodic signals from a rate control mechanism 12). Bondi further

discloses processing polling responses at the network management station **(See**

column 7 lines 44-63 and Figure 7 of Bondi for reference to processing ping

acknowledgments, which are polling responses, at the management station).
Bondi also discloses processing at least one node identified by an identifier in a set of a
list of sets by sending a polling message to the at least one node from the network
management station with each set of the list of sets including zero or more identifiers of
nodes **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for**
reference to processing nodes by sending a status poll from the management
station to the nodes that are identified by IP addresses, or identifiers, in a entry,
which is a set containing 1 node, of a queue, which is a list of the entries, or sets,
with each entry in the queue corresponding to exactly one node identifier). Bondi
further discloses advancing to the next set of the list of sets **(See column 5 line 54 to**
column 6 line 28 and Figures 3-5 of Bondi for reference to sending status poll
messages to each node in the queue at a predetermined time interval meaning
that after a poll is sent to the current entry in the queue, the queue will advance to
the next entry and send a poll to the next entry after the predetermined period of
time). Bondi also discloses that each identifier comprises a pointer into a table stored
in the network management station **(See column 5 line 54 to column 6 line 28 and**
Figures 3-5 of Bondi for reference to each entry in the transmission queue
containing an identifier, or pointer, corresponding to entries stored in an
unacknowledged poll table). Bondi does not disclose that the list is a circular list of
sets.

      With respect to claim 16, Bondi discloses a system comprising a processor
(See column 1 lines 41-64 of Bondi for reference to a host processor that is a

network management station in a system). Bondi also discloses a memory storing a

network management system for execution by the processor for monitoring nodes in a

network **(See column 1 lines 41-64 of Bondi for reference to the network manager**

being responsible for monitoring nodes of the system, meaning, since the

network manager is a processor, there must be a code stored in a memory of the

network manager that is used to monitor the nodes). Bondi further discloses

computer code for a timer that generates a signal at periodic intervals **(See column 5**

line 54 to column 6 line 28 and Figures 3 of Bondi for reference to a status poll

transmission queue 10 receiving periodic signals from a rate control mechanism

12, meaning there must be a computer code stored in the network manager to

execute this process). Bondi also discloses computer code for a poller that processes

polling responses **(See column 7 lines 44-63 and Figure 7 of Bondi for reference to**

processing ping acknowledgments, which are polling responses, meaning there

must be a computer code stored in the network manager to execute this process).

Bondi further discloses computer code for a poller that processes at least one node

identified by an identifier in a set of a list of sets with each set of the list of sets including

zero or more identifiers of nodes **(See column 5 line 54 to column 6 line 28 and**

Figures 3-5 of Bondi for reference to the network monitor processing nodes by

sending a status poll to the nodes that are identified by IP addresses, or

identifiers, in a entry, which is a set containing 1 node, of a queue, which is a list

of the entries, or sets, with each entry in the queue corresponding to exactly one

node identifier, meaning there must be a computer code stored in the network

manager to execute this process). Bondi also discloses computer code that

advances to the next set of the list of sets **(See column 5 line 54 to column 6 line 28**

and Figures 3-5 of Bondi for reference to sending status poll messages to each

node in the queue at a predetermined time interval meaning that after a poll is

sent to the current entry in the queue, the queue will advance to the next entry

and send a poll to the next entry after the predetermined period of time, meaning

there must be a computer code stored in the network manager to execute this

process). Bondi does not disclose that the list is a circular list of sets.

   With respect to claim 17, Bondi discloses a system for monitoring nodes in a

network including a plurality of nodes **(See the Abstract of Bondi for reference to a**

method and system for monitoring nodes in a network having a plurality of

nodes). Bondi also discloses a means for receiving a signal from a timer at periodic

intervals **(See column 5 line 54 to column 6 line 28 and Figures 3 of Bondi for**

reference to a status poll transmission queue 10 receiving periodic signals from a

rate control mechanism 12). Bondi further discloses a means for processing polling

responses **(See column 7 lines 44-63 and Figure 7 of Bondi for reference to**

processing ping acknowledgments, which are polling responses). Bondi also

discloses a means for processing at least one node identified by an identifier in a set of

a list of sets with each set of the list of sets including zero or more identifiers of nodes

(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference

to processing nodes by sending a status poll to the nodes that are identified by IP

addresses, or identifiers, in a entry, which is a set containing 1 node, of a queue,

which is a list of the entries, or sets, with each entry in the queue corresponding

to exactly one node identifier). Bondi further discloses a means for advancing to the

next set of the circular list of sets **(See column 5 line 54 to column 6 line 28 and**

Figures 3-5 of Bondi for reference to sending status poll messages to each node

in the queue at a predetermined time interval meaning that after a poll is sent to

the current entry in the queue, the queue will advance to the next entry and send

a poll to the next entry after the predetermined period of time). Bondi does not

disclose that the list is a circular list of sets.

With respect to claims 1, 9, 10, 11, 16, and 17, Miller et al., in the field of

communications discloses using a circular list of sets **(See column 10 line 53 to**

column 11 line 29 of Miller et al. for reference to using a circular queue, which, as

defined by Miller et al., includes scheduling timeslots 32 formatted as a list of

download records 36, with each list having zero or more entries, and for reference

to servicing each timeslot in a circular manner by checking to see if a timeslot

contains a record 36, and servicing the records 36 if one is present before moving

on to the next timeslot in a circular manner). Using a circular list of sets has the

advantage of allowing data transmissions to many users to be serviced in a round-robin

fashion, such that multiple data transmission may occur simultaneously without having

to wait until transmissions of data to one device have been fully completed before

sending data to other devices.

It would have been obvious for one of ordinary skill in the art at the time of the

invention, when presented with the work of Miller et al., to combine the used of a

circular list of sets, as suggested by Miller et al., with the system and method of Bondi,

with the motivation being to allow data transmissions to many users to be serviced in a

round-robin fashion, such that multiple data transmission may occur simultaneously

without having to wait until transmissions of data to one device have been fully

completed before sending data to other devices.

With respect to claim 3, Bondi discloses moving the identifier to a subsequent

set of the list of sets **(See column 7 line 64 to column 8 line 6 and Figure 7 of Bondi**

for reference to when a timeout occurs before an acknowledgement is received

for a poll, or ping, and if the ping count does not match the maximum ping count

number, storing the IP address, or identifier, of the node at a subsequent entry, or

set, in the queue, or list of entries).

With respect to claim 4, Bondi discloses that the subsequent set is the set that

will be processed at the next timing interval of the node identified by the identifier **(See**

column 7 line 44 to column 8 line 6 and Figure 7 of Bondi for reference to storing

the node at a subsequent position in the queue only after a timeout,

corresponding to the next timing interval that the node should be polled at).

With respect to claim 5, Bondi discloses adding a copy of the identifier to a

subsequent set of the circular list of sets **(See column 7 line 64 to column 8 line 6**

and Figure 7 of Bondi for reference to when a timeout occurs before an

acknowledgement is received for a poll, or ping, and if the ping count does not

match the maximum ping count number, storing a copy of the IP address, or

identifier, of the node at a subsequent entry, or set, in the queue, or list of

entries).

With respect to claim 6, Bondi discloses that the subsequent set is the set that

will be processed when a response form the node identified by the identifier is expected

(See column 7 line 44 to column 8 line 6 and Figure 7 of Bondi for reference to

storing the node at a subsequent position in the queue only after a timeout,

corresponding to the next timing when a response from the node is expected by).

With respect to claim 7, Bondi discloses processing polling responses (See

column 7 lines 44-63 and Figure 7 of Bondi for reference to processing ping

acknowledgments, which are polling responses).

With respect to claim 8, Bondi discloses that the selecting and advancing are

performed at periodic intervals (See column 5 line 54 to column 6 line 28, column 7

lines 36-45, and Figures 3 and 7 of Bondi for reference to sending and processing

pings in a controlled sequence at predetermined periodic intervals as controlled

by a rate control mechanism 12).

With respect to claim 12, Bondi discloses moving the identifier to a subsequent

set of the list of sets (See column 7 line 64 to column 8 line 6 and Figure 7 of Bondi

for reference to when a timeout occurs before an acknowledgement is received

for a poll, or ping, and if the ping count does not match the maximum ping count

number, storing the IP address, or identifier, of the node at a subsequent entry, or

set, in the queue, or list of entries).

With respect to claim 13, Bondi discloses that the subsequent set is the set that

will be processed at the next timing interval of the node identified by the identifier **(See**

column 7 line 44 to column 8 line 6 and Figure 7 of Bondi for reference to storing

the node at a subsequent position in the queue only after a timeout,

corresponding to the next timing interval that the node should be polled at).

With respect to claim 14, Bondi discloses adding a copy of the identifier to a

subsequent set of the list of sets **(See column 7 line 64 to column 8 line 6 and Figure**

7 of Bondi for reference to when a timeout occurs before an acknowledgement is

received for a poll, or ping, and if the ping count does not match the maximum

ping count number, storing a copy of the IP address, or identifier, of the node at a

subsequent entry, or set, in the queue, or list of entries).

With respect to claim 15, Bondi discloses that the subsequent set is the set that

will be processed when a response form the node identified by the identifier is expected

(See column 7 line 44 to column 8 line 6 and Figure 7 of Bondi for reference to

storing the node at a subsequent position in the queue only after a timeout,

corresponding to the next timing when a response from the node is expected by).

With respect to claim 18, Bondi discloses that the table comprises IP address

of the nodes in the network and a transmission count representing the number of polling

messages sent to each of the nodes **(See column 5 lines 54 to column 6 line 28 of**

Bondi for reference to the unacknowledged poll table consisting of both an IP

record, which is an IP address of nodes in the network, and a timeout record

including a ping count record, which is a record of the number of polling

messages sent to the nodes).

With respect to claim 19, Bondi discloses that processing polling responses

comprises removing the polling response from a buffer (See column 5 lines 54 to

column 6 line 28 of Bondi for reference to receiving poll acknowledgements at the

management station, meaning the management station must have some memory,

or buffer, to receive the acknowledgements from which the acknowledgements

are removed after processing is finished).

With respect to claim 20, Bondi discloses updating a transmission count for the

node sending the polling response to indicate the number of polling responses that have

been received from the node (See column 5 lines 54 to column 6 line 28 of Bondi for

reference to updating the number of polling acknowledgements received for each

node by updating the acknowledgement return time in the poll table).

With respect to claim 21, Bondi discloses crating a copy of the pointer in the list

when a response from a polling message is expected to be received (See column 7

line 64 to column 8 line 6 and Figure 7 of Bondi for reference to when a timeout

occurs before an acknowledgement is received for a poll, or ping, and if the ping

count does not match the maximum ping count number, storing a copy of the IP

address, or pointer, of the node at a subsequent entry, or set, in the queue, or list

of entries).

Response to Arguments

4.   Applicant's arguments filed 11/3/05 have been fully considered but they are not

persuasive.

Regarding Applicant's argument that:

"Bondi does not show or suggest advancing to a next set in a list of sets,

as suggested by the Examiner." (See section III of Applicant's

Remarks/Arguments section)

the Examiner respectfully disagrees. As discussed in the rejections above, Bondi

discloses advance to the next entry of a queue. Each entry in the queue of Bondi is a

set containing one element. There is no limitation in the claims stating that a set must

have more than one element. Therefore, since each entry in the queue is a set, the

queue itself is a list of sets, with the management system advance to a new set at

periodic intervals. Therefore, Bondi does disclose advance to a next set of a list of sets.

Regarding Applicant's argument that:

"However, Miller et al. simply discloses using a circular queue [and not the

claimed circular list of sets]." (See section III of Applicant's

Remarks/Arguments section)

the Examiner respectfully disagrees. Miller et al. discloses records 36, which are

individual list elements, that are a part of timeslots 34, which are sets that may contain

zero, one, or more records 36, with the timeslots 34 being part of a queue 32, which is a

circular list of the timeslots 34. Therefore, the queue 32 is not the circular queue, as

defined by the Applicant's arguments. Miller et al. discloses a circular list, the queue 32, of sets, the timeslots 34, where every record 36 in a timeslot 34 is processed and sent prior to moving on to the next timeslot. Therefore, Miller et al. does disclose the claimed "circular list of sets".

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
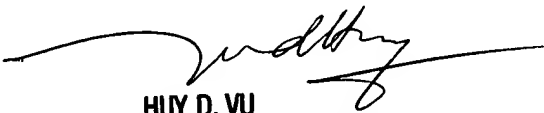
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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jem

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600